

The following group of samples is for BREAKOUT #3 at Kempenfelt.

- to be used for ACTION activity
- each table of 4 will look at the student samples (which are either all 3 correct, all 3 close or all 3 troublesome). For Kempenfelt, there is an additional sample that is 'interesting' that each table group will get (so 4 samples in total)
- the group will decide on feedback for each sample and general feedback for this 'group' of students for the following day
- each group of 4 will share their feedback with the 'whole group' using a document camera
- discussion will then move towards, "how do we help all of these diverse groups in our classroom" the next day?

The following  
samples are:

Correct

## 4 Keepin' Tabs

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

$$1267 = 1 \text{ pound}$$

$$1 \text{ kilogram} = \$0.88$$

The amount of kilograms

$$k = \frac{1500}{\$0.88}$$

$$k = 1704.5 \text{ kg}$$

∴ you need 1704.5 kg's  
to get a wheelchair  
of \$1500

kilogram to pounds

$$1704.5 \times 2.2 = 3749.9$$

Pounds to pop tabs

$$\begin{aligned} t &= \text{Pounds} \times \text{pop tabs per pound} \\ &= 3749 \times 1267 \\ &= 4749983 \end{aligned}$$

∴ the amount of pop tabs  
in a \$1500 wheelchair is  
4749983.



### 4 Keepin' Tabs

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If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

$$1267 \text{ pop tabs} = 1 \text{ pound}$$

$$1 \text{ Kilo} = 2.2 \text{ pounds}$$

$$1267 \times 2.2 = 1 \text{ Kilo of pop tabs}$$

$$1267 \times 2.2 = 2787.4 \text{ pop tabs} = 1 \text{ kilo}$$

$$\text{If } 2787.4 \text{ pop tabs} = \$0.88 \text{ and you need } \$1500.$$

How many times does \$1500 go into \$.88?

$$\frac{1500}{.88} = 1704.55$$

$$2787.4 = 1 \text{ kilo}$$

$$1 \text{ Kilo} = \$0.88$$

$$2787.4 = \$0.88$$

If the cost of the wheel chair is \$1500.

Then  $\frac{1500}{.88} = 1704.55$  is how many kilos of pop tabs needed.

$$2787.4 \times 1704.55$$

(1 kilo) (# of kilos needed)

= 4751262.67 pop tabs are needed to purchase the \$1500 wheel chair.



**Keepin' Tabs**

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If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

$$1267 \times 2.2^{lb} = 2787.4$$

Hint:

1 kilogram = 2.2 pounds

$$2787.4 = 88^c$$

$$\$1500 \div \$0.88 = 1704.5$$

$$1704.5 \times 2787.4 = 4,751,123.3$$

$\therefore$  we need 4751124 pop tabs to get the wheelchair



**4 Keepin' Tabs**

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

$$1267 = 0.45 \text{ kg}$$

$$0.45 \times 0.88 = 0.396$$

$$0.45 \times 5 = 2.25 \times 0.88 \\ = 1.98$$

$$0.45 \times 100 = 45 \times 0.88 \\ = 39.6$$

$$0.45 \times 1000 = 450 \times 0.88 \\ = 396$$

$$0.45 \times 2000 = 900 \times 0.88 \\ = 792$$

$$0.45 \times 10000 = 4950 \times 0.88 \\ = 4356$$

$$0.45 \times 4000 = 1800 \times 0.88 \\ = 1584$$

$\therefore$  you would need  
5068000 pop tabs to collect  
enough money to  
buy the wheelchair  
and you would have  
\$84 left over.

$$1267 \times 4000 = 5068000$$



The following  
samples are:

Correct

**Keepin' Tabs**

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

$$0.88/\text{Kg}$$

Hint:

1 kilogram = 2.2 pounds

$$1267 \times 2.2$$

$$= 2787.4 / 0.88\text{\$}$$

$$1500 \div 0.88$$

4751250?

For 1 Kg of Pop tabs costs 88¢. 1 Kg is the same as 2.2 pounds. 1 pound of pop tabs is 1267 pop tabs. I multiplied 1267 pop tabs by 2.2 pounds and I got 2787.4.  $\therefore$  1 Kg of pop tabs is 2787.4. The wheel chair costs \$1500. It costs 88¢ for 2787.4 pop tabs. I divided \$1500 by 88¢. I got 1704  $\times$  2787.4 pop tabs for a wheel chair that cost \$1500.





#### 4 Keepin' Tabs

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

Find kilograms

# of pop tabs  $\times$  2.2 pounds

$$= 1267 \times 2.2$$

$$= 2787.4 \text{ pop tabs / kg}$$

How many kg do we need to purchase the wheelchair?

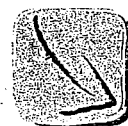
$$\frac{1500}{0.88} = 1704.5 \text{ kg}$$

Multiply pop tabs/kg by total kilograms

$$(2787.4)(1704.5)$$

$$= 4751123.3$$

$\therefore$  you will need 4751123.3 pop tabs to buy a \$1500 wheelchair.



## 4 Keepin' Tabs

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

If 1267 pop tabs = 1 pound and 2.2 pounds is equal to one kilogram then I must multiply 1267 by 2.2 in order to figure out how many pop tabs I would need for one kilo.

$$\begin{array}{r} 1267 \\ \times 2.2 \\ \hline 2534 \\ 2534 \times \\ \hline 2787.4 \end{array}$$

$$\begin{array}{r} 1704.545455 \\ 0.88 \overline{)1500} \end{array}$$

$$\begin{array}{r} 2787.4 \\ \times 1704.6 \\ \hline 4751462.04 \end{array}$$

∴ I need 4751462.04 pop tabs to make \$1500

I will need 2787.4 pop tabs in order to make one kilogram. so if 2787.4 is worth \$0.88 I now need to find out how many times \$1500 can go into 0.88.

Now that I know 1704.6 is how many times \$1500 can go into 0.88 I need to multiply 1704.6 by 2787.4 to know how many pop tabs I will need.



**4 Keepin' Tabs**

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

$$1267 = 0.45 \text{ kg}$$

$$0.45 \times 0.88 = 0.396$$

$$0.45 \times 5 = 2.25 \times 0.88 = 1.98$$

$$0.45 \times 100 = 45 \times 0.88 = 39.6$$

$$0.45 \times 1000 = 450 \times 0.88 = 396$$

$$0.45 \times 10000 = 4500 \times 0.88 = 3960$$

$$0.45 \times 100000 = 45000 \times 0.88 = 39600$$

$$0.45 \times 4000 = 1800 \times 0.88 = 1584$$

$\therefore$  you would need 5068000 pop tabs to collect enough money to buy the wheelchair and you would have \$84 left over.

$$1267 \times 4000 = 5068000$$



The following  
samples are:

Correct



**4 Keepin' Tabs**

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

to get 1 kilo gram

you need 2.2 pounds,

so if 1267 pop tabs have

a mass of 1 pound multiply

1267 by 2.2 which equals 2787.44

so 2787.44 is how many pop tabs  
you need for a kilogram

\$1500

.88

= 1704.54

← this is how many kilograms  
of pop tabs you need

the amount of pop tabs in total  
is 4751314. to get this is  
multiplied 1704.54 x 2787.44





4

**Keepin' Tabs**

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

$$1267 \times 2.2 = 2787.4$$

$$\therefore 2787.4 \text{ pop tabs} = 1 \text{ kg } \$0.88$$

Pop tabs need to buy wheelchair

$$1500 = 0.88x$$

$$\frac{1500}{0.88} = \frac{0.88x}{0.88}$$

$$1704.5 = x$$

Hint:

1 kilogram = 2.2 pounds

$\therefore$  the number of pop tabs needed

is  $2787.4 \times 1704.5 = 4751124$  pop tabs are needed.



### Pop Tabs

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company sells the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

$$1267 \text{ tabs} = 1 \text{ pound}$$

$$\text{about } 2787 \text{ tabs} = 2.2 \text{ pounds} \\ = 1 \text{ kg}$$

Hint:

$$1 \text{ kilogram} = 2.2 \text{ pounds}$$

Pop tabs sold at \$0.88/kg.

$$\text{if } 2787 \text{ tabs} = 1 \text{ kg}$$

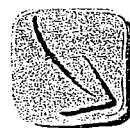
$$\text{then } 2787 \text{ tabs} = \$0.88$$

to find how many groups of 2787 pop tabs needed, take total cost,  $\$1500 \div 0.88 = 1705$

$\therefore$  about 1705 groups of 2787 tabs are needed.

$$1705 \times 2787 = 4,751,835$$

$\therefore$  In total 4,751,835 pop tabs are needed to purchase a wheelchair worth \$1500.



**4 Keepin' Tabs**

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If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

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Hint:

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$$0.45 \times 1000 = 450 \times 0.88 \\ = 396$$

$$0.45 \times 2000 = 900 \times 0.88 \\ = 792$$

$$0.45 \times 10000 = 4950 \times 0.88 \\ = 4356$$

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$\therefore$  you would need  
5068000 pop tabs to collect  
enough money to  
buy the wheelchair  
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$$1267 \times 4000 = 5068000$$





The following  
samples are:

Problematic— the  
students either didn't  
grasp the problem or  
had significant  
difficulty

## 4 Keepin' Tabs

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

$$\cancel{\$0.88} = 1.93 \text{ (pounds)}$$

$$\cancel{1267 \times 1.93}$$

$$\frac{1500}{1.93} \times 777.20$$

$$\cancel{777.20 \times 1.93}$$

$$\cancel{= 1499.96 = 1500 *}$$

~~777.20 Pop tabs are needed to purchase a wheelchair~~

1267 tabs are in 1 pound

but 2.2 pounds = 1 kg

$$\therefore 1267 \times 2.2 = 2787.4$$

So there are 2787.4 pop tabs in 2.2 pounds.



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If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

$$\text{\$ } 0.88 = 1 \text{ kilogram}$$

$$1 \text{ Kilogram} = 2.2 \text{ Pounds}$$

$$1267 \text{ Pop tabs} = 1 \text{ Pound}$$

$$1267 \times 2 = 2534 = 2 \text{ Pounds}$$

$$\text{\$ } 0.88 \times 2 = \text{\$ } 1.76 = 2 \text{ Kilograms}$$



**4 Keepin' Tabs**

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If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

You will need 1705 pop tabs  
which has a mass of 1.2 pounds  
to buy a wheel chair worth \$1500.

I used process of elimination, because when I  
got close to 1500 I would guess and  
every time I got closer then I found out  
it was  $1705 \times 0.88$  to get \$1500.4.





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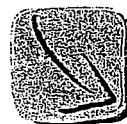
$$0.45 \times 2000 = 900 \times 0.88 \\ = 792$$

$$0.45 \times 10000 = 4950 \times 0.88 \\ = 4356$$

$$0.45 \times 4000 = 1800 \times 0.88 \\ = 1584$$

$\therefore$  you would need  
5068000 pop tabs to collect  
enough money to  
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samples are:

Problematic— the  
students either didn't  
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**4 Keepin' Tabs**

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If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

\$0.88 per 2.2 lbs or 1kg

Hint:

1 kilogram = 2.2 pounds

$$1 + 1.2 = 2.2$$

$$1267 \times 1.2 = 1520.4$$

$$\frac{1520.4}{0.88} = 1727.7$$

∴ you need about 1727.7 pop tabs to purchase a wheelchair worth \$1500



**Keepin' Tabs**

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per <sup>2.2 pounds</sup> kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

$$1267 \text{ tabs} = 1 \text{ lb} \quad \left\{ \begin{array}{l} 1267 \times 0.88 = \$1114.96 \rightarrow \text{for 1 pound} \\ 88^c / 2.2 \text{ pounds} \end{array} \right.$$

$$\begin{array}{r} \$1500 \\ \$1114.96 \div = 1.35 \end{array}$$

$$\therefore 1267 \times 1.35 = 1710.45$$

$\therefore$  to buy a \$1500 wheelchair, you need about 1711 pop tabs





### Popin' Tabs

A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

I know 1267 is in <sup>one</sup> pound  
~~2787~~

$$1267 \times 2.2 = 2787 \text{ Kg}$$

-I think I would need to convert 1267 into kilograms. Here's how I would do it.

$$1267 \times 2.2 = 2,787 \text{ pop tabs with 2.2 pounds}$$

-I know 2,787 is 1 kilogram.

-I know I need 1500 worth of pop tabs. Here's how I would do it.

$$\begin{aligned} &0.88 \times 1500 \\ &= 1320 \text{ Kg} = 1500 \\ &\text{Pop tabs} \end{aligned}$$



**4 Keepin' Tabs**

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If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

Hint:

1 kilogram = 2.2 pounds

$$1267 = 0.45 \text{ Kg}$$

$$0.45 \times 0.88 = 0.396$$

$$0.45 \times 5 = 2.25 \times 0.88 \\ = 1.98$$

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$\therefore$  you would need  
5068000 pop tabs to collect  
enough money to  
buy the wheelchair  
and you would have  
\$84 left over.

$$1267 \times 4000 = 5068000$$



The following  
samples are:

Close – they have  
elements of  
correctness, but some  
errors.

**4 Keepin' Tabs**

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If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

$$2.2 \times 0.88 = 1.94 \text{ for 1267 tabs. } \times$$

Hint:

1 kilogram = 2.2 pounds

$$1 \text{ pound} = 2.2 \text{ kg.}$$

$$\frac{1267}{1.94} = \frac{x}{1500}$$

$$= 97,963.91 \text{ tabs}$$

therefor you will need 97,963.91 tabs to buy the wheelchair.



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A student council collects aluminum pop tabs to raise money to purchase a wheelchair. A company buys the pop tabs for \$0.88 per kilogram.

If 1267 pop tabs have a mass of one pound, how many pop tabs are needed to purchase a wheelchair worth \$1500?

Show your work.

$$\begin{aligned} \text{Total amount of Kg} &= \frac{\$ \text{ of wheelchair}}{\$ \text{ per Kilogram}} \\ &= \frac{1500}{0.88} \\ &= 1704.5 \text{ Kg} \end{aligned}$$

Hint:

1 kilogram = 2.2 pounds

$$\begin{aligned} \text{amount of LBS} &= \frac{1704.5}{2.2} \\ &= 774.8 \end{aligned}$$

$$\begin{aligned} \text{Total amount of tabs} \\ \text{needed} &= \text{amount of LBS needed} \times \text{amount of tabs in 1 LBS} \\ &= 774.8 \times 1267 \\ &= 981672 \end{aligned}$$

∴ In order to afford a \$1500 wheelchair they need 981672 pop tabs





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Show your work.

Hint:

1 kilogram = 2.2 pounds

for how much  
money for 1 pound of  
pop tabs

$$0.88 \times 2.2 = 1.936$$

how  
much  
pounds  
needed

$$1500 \div 1.936 = 774.79$$

$$\$1.936 = 1267 \text{ pop tabs}$$

$$774.79 \times 1267 = 981658.93$$

how much pop tabs  
needed for \$1500

$\therefore$  you will need 981658.93 pop  
tapes for \$1500

**4 Keepin' Tabs**

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Hint:

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